

### **REMARKS**

Applicants appreciate the Examiner's thorough review of the present application, and respectfully request reconsideration in light of the preceding amendments and the following remarks.

Claims 1, 4-16, 19-25, 27-36, 38-46 are pending in the application. Claims 2-3, 17-18, 26, 37 have been cancelled without prejudice or disclaimer. Several original claims have been amended to better define the claimed invention. The amended claims find solid support in the original specification and drawings, e.g., FIGs. 4-7 and the corresponding text in the specification, e.g., paragraphs 0073 and 0074 of the published application. No new matter has been introduced through the foregoing amendments.

The 35 U.S.C. 112, *second paragraph* rejection is believed overcome in view of the above amendments.

The new art rejections relying on *Hsu* and *Trossen* are noted. Basically, the Office is now relying on *Trossen* as evidence that communication methods can be applied across multiple standards, such as 1xEV-DO and 1xEV-DV, and hence, it would have been obvious to modify the *Hsu* 1xEV-DV communication method to be applicable in another standard, i.e., 1xEV-DO to arrive at the claimed invention. Applicants respectfully traverse the new obviousness rationale, at least because the cited portions of *Trossen* does not explicitly supply the motivation being relied on in the new rejections.

Furthermore, even assuming *arguendo* that the references were combinable as suggested in the Office Action, their combination would still lack the claimed BCMCS assignment ratio recited in independent claim 1 and similar wordings in other independent claims. As discussed in the previous Response:

It is acknowledged that *Hsu* discloses a shared mode in which the “base station delivers one BCMCS session indicated by the common mac\_id. Mobile stations search for that common mac\_id in order to receive the corresponding BCMCS. The mac\_id is carried out on the packet data control channel, F-PDCCH, and BCMCS content traffic is carried on the packet data channel, F-PDCH.” *See, for example, Hsu* at paragraph 0079. However, the reference is silent on how the BCMCS and 1xEV-DV service share the resource in the shared mode, and fails to mention any BCMCS assignment ratio. Accordingly, *Hsu* as applied by the Examiner does not anticipate independent claim 1.

The Office has not specified with reasonable clarity as to why Applicants’ previous argument was not found persuasive. Clarification is respectfully requested.

Furthermore, Applicants’ reading of the *Hsu* teachings cited in the Office Action as disclosing the claimed BCMCS assignment ratio does not reveal that the reference indeed teaches or suggests claim feature. The cited teachings of *Hsu* are reproduced herein below for the Examiner’s convenience of review.

[0045] A network part of the communication system includes a base transceiver station (BTS) 18. Both the base transceiver station and the mobile station form radio transceivers capable of transducing radio signals therebetween by way of radio channels defined upon the forward and reverse links 14 and 16. The base transceiver station forms part of a radio access network portion of the network part of the communication system. And, the radio access network part of the communication system is here shown further to include a base station controller (BSC) 22 and point control function (PCF) and a packet data service node (PDSN) 24. The BSC is coupled between the base transceiver station and the PDSN.

Paragraph 0045 of *Hsu* (cited against claim 1) discloses a general architecture of a communication system. No BCMCS assignment ratio was mentioned.

[0057] The channel-specific parameters of the channel-specific layer 96 include, for a 1xEV-DV transport channel, MBS-channel Walsh code indications, data rate indications, MCS, or other coding level indications, frame size indications, and repetition number indications, as well as any other desired parameters, specific to a particular channel-type.

Paragraph 0057 of *Hsu* (cited against claim 1) discloses a general arrangement of various parameters in a 1xEV-DV message. No BCMCS assignment ratio was mentioned.

[0048] In the exemplary implementation in which the CDMA 200 system provides 1xEV-DV capabilities, multicast and broadcast communication services provided pursuant to operation of the communication system utilize a forward shared packet data channel defined upon the radio link 14 together with a forward supplemental channel, also defined upon the radio link 14, by which to effectuate the communication service. That is to say, the multicast and broadcast service is effectuated, at least selectably, upon two or more transport channels.

[0049] The data that is to be multicast and broadcast pursuant to the MBS communication service is formatted by a frame transmitter 42 that also forms a portion of the apparatus 34 of an embodiment of the present invention. The frame transmitter operates to transmit frames of the data to effectuate the communication of the MBS data service. The frame transmitter also operates pursuant to a modified, H-ARQ retransmission scheme, selectably to retransmit data frames or packets responsive to certain conditions.

Paragraphs 0048-0049 of *Hsu* (cited against claim 4) disclose a general operation of a 1xEV-DV system. No BCMCS assignment ratio was mentioned.

[0053] FIG. 2 illustrates an exemplary flexible transport channel structure, shown generally at 64, defined pursuant to an embodiment of the present invention and pursuant to which the apparatus 34, shown in FIG. 1, operates. The channel structure includes a physical layer, here in the exemplary implementation, a 1xEV-DV physical layer 66 and a 1xRTT physical layer 68, as defined in the CDMA 2000 operating specification, or proposed variant thereof. The 1xEV-DV physical layer defines an MBS (multicast and broadcast service) channel 72 and a data channel 74 upon which to communicate, respectively, MBS data and voice and other data. Analogously, the 1xRTT physical layer 68 defines both an MBS channel 76 and a data channel 78. Data to effectuate MBS and data/voice services, respectively, is communicated upon the respective channels to be delivered to the mobile station, here to be delivered in a multiplexed or QoS (quality of service)-dependent manner, indicated by the block 82. And, thereafter, the data of the associated services are provided to an MBS layer 84 or in another services layer 86 thereby. And as indicated by the segments 88, data delivered by way of the channels defined by either of the physical layers 66 and 68 are provided to the appropriate layer 84 or 86. Because channels defined, selectably, upon

both of the 1xEV-DV and 1xRTT physical layers are utilized to effectuate communication services, improved capacity, and flexibility, of communications are permitted. And, here, the 1xEV-DV, forward-shared packet-data channel is shared by high-speed packet data users based upon code or time multiplexing. The channel is used here also for MBS information delivery.

[0054] With such channel designations, the MUX/QoS delivery layer 82 must be able to differentiate between the data channels 74 and 78 and the MBS channels 72 and 76 upon which the respective data is communicated. The broadcast service parameter message generator 36, shown in FIG. 1, amongst other things, provides for this differentiation.

Paragraphs 0053-0054 of *Hsu* (cited against claim 4) disclose that MBS (multicast and broadcast services) can be served over the 1xEV-DV system and together with 1xEV-DV messages. However, BCMCS assignment ratio was mentioned.

Applicants respectfully submit that the most relevant teaching of *Hsu* is paragraphs 0079-0081 that have been discussed at least partially in the previous Amendment and repeated *supra* as failing to teach or suggest the claim feature. Accordingly, the new rejections are improper and should be withdrawn.

Notwithstanding the above and solely for the purpose of expediting prosecution, several amendments have been made to the **independent claims** to highlight the distinctive feature(s) of the claimed BCMCS assignment ratio and/or similar wordings. Specifically, the claimed BCMCS assignment ratio and/or similar wordings now define that the frequency capacity of a specific 1xEV-DO FA is allocated in accordance with the received ratio to both the BCMCS and 1xEV-DO service in a mixed mode.

All that was taught in *Hsu*, especially paragraph 0081, is that the system switches from a shared mode to a dedicated mode depending on the number of terminals tuning to a particular FA. Switching from one mode to another is not the same as allocating resources in a mode.

Additionally, a decision (to switch to another mode) made based on a number of terminals tuning to a channel is irrelevant to allocation of the frequency capacity of said channel to different services based on a received ratio.

Therefore, Applicants respectfully submit that the amended independent claims are patentable over the art.

As to independent **claim 42**, Applicants respectfully disagree with the Office's position that *Hsu* teaches or suggests the claimed shifting of a terminal from the specific 1xEV-DO FA used for both services to another 1xEV-DO FA when said terminal is receiving a 1xEV-DO service that exceeds a predetermined threshold. *Hsu*, again in the most relevant paragraph 0081, discloses switching the whole channel (rather than a terminal) to a different mode based on a number of terminals tuning to the mixed service channel (rather than based on the 1xEV-DO service of the channel).

The outcomes in the claimed method and *Hsu* are completely different. In the claimed invention, the mode remains unchanged with the 1xEV-DO service ratio being maintained at or below a predetermined threshold, and the shifted terminal is now receiving the 1xEV-DO service on a different FA. In contrast, in *Hsu* the mode is switched and all terminals remain on the same channel, i.e., none of the terminal are shifted to another channel.

Therefore, Applicants respectfully submit that independent claim 42 is patentable over the art.

The **dependent claims** are considered patentable at least for the reason(s) advanced with respect to the respective independent claim(s).

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Accordingly, Applicants respectfully submit that all claims are now in condition for allowance. Early and favorable indication of allowance is courteously solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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